

November 2001

PINE CREEK RANCH

FY 2001 Annual Report



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PINE CREEK RANCH FY2001 ANNUAL REPORT
November 7, 2001

FOLLOWING: FY 2001 SCOPE OF WORK

OBJECTIVE 1. Gather scientific baseline information for monitoring purposes and to assist in the development of management plans for Pine Creek Ranch.

Task 1.1 Establish permanently marked monitoring points in riparian and upland habitats.

Forty-four upland monitoring points were established as a part of the field work toward completing a baseline HEP for Pine Creek Ranch. Twelve upland monitoring points were established on high points of the property for landscape monitoring photography. Fifty-one riparian monitoring points have been established.

Task 1.2 Take monitoring photos at riparian and upland monitoring points.

Monitoring photos were taken at all monitoring points this year.

Task 1.3 Perform a Proper Functioning Condition Assessment of Pine Creek.

A PFC Assessment of Pine Creek was conducted April 3-5, 2001 with the National Riparian Service Team and CTWS staff. The creek within the property was divided into 14 reaches for assessment. One reach (0.2 miles) was rated as in PFC, one reach (0.5 miles) was rated as nonfunctional, with inclusions of functional-at-risk, and all of the remaining reaches were rated as various levels of functional-at-risk. The summary report provided by the NRST has been forwarded to BPA.

Task 1.4 Conduct biological surveys.

1.11 Conduct big game inventories to calculate age and sex ratios.

Game surveys were conducted on the ground between November 16 and 28, 2000, and by helicopter on April 12, 2001. A total of 187 deer were classified in the fall survey, and 206 in the spring survey. Fall ratios were 23 bucks per 100 does, and 39 fawns per 100 does, and the spring ratio was 35 fawns per 100 adults. A total of 33 elk were classified in the fall survey, and 51 in the spring, these numbers are too low for calculating population ratios.

A few pronghorn antelope were observed throughout the year.

Bighorn sheep were observed on Pine Creek Ranch in 2001, for the first time in recent years. A group of ten, including young rams and ewes, was observed near Robinson Canyon. Exotic Audad sheep were also observed on the property in 2001, as well as in the Spring Basin WSA.

1.12 Conduct fisheries redd counts.

A steelhead redd count was conducted with ODFW on April 26, 2001. Low water in Pine Creek due to drought conditions had precluded upstream migration above a section that lacked surface flow approximately 0.5 mile above the John Day River. One redd, and one carcass, were observed below this point.

1.13 Conduct breeding bird point counts at monitoring points.

Point counts were conducted twice at each of 40 riparian monitoring points on Pine Creek, Cove Creek, and Robinson Canyon between May 16 and June 7, 2001.

1.14 Record observations of birds throughout the year.

Weekly records of all species observed have been maintained. A total of 131 species have been observed on the ranch to date.

Task 1.5 Complete a Landsat vegetation classification by ground-truthing major vegetation classes.

Initial ground-truthing was conducted in association with baseline HEP measurements in upland cover types. A protocol was tested with OMSI's Native American Salmon Camp Research Teams in July and August. Detailed ground-truthing of this coverage will not be completed, in favor of completing a higher resolution vegetation mapping project in 2002, as a cooperative project between the Tribes, BLM, NPS, and the Oregon NHP.

Task 1.6 Conduct baseline Habitat Evaluation Procedures to determine initial mitigation crediting to BPA.

The field component of the baseline HEP was conducted May 21-25, 2001, with assistance from WDFW, Kalispel Tribes, USFWS, and ODFW. A baseline HEP report was provided to BPA on October 23, 2001.

Objective 1. Additional Notes:

Riparian vegetation monitoring conducted by subcontract with Duckfoot Survey Co., and water quality monitoring on Pine Creek was conducted by DEQ.

OBJECTIVE 2. Complete and implement management plans.

Task 2.1 Complete contract with OSU to develop a Watershed Management Plan.

2.11 Provide a plan outline, GIS maps, and text assessments of current ranch conditions to OSU.

This task was completed prior to July, 2001.

2.22 Assist with the development of the watershed management plan by reviewing and editing drafts.

The Habitat Manager reviewed and extensively edited early drafts of the watershed management plan.

2.23 Accept the final watershed management plan from OSU by July 2001.

Collaboration with OSU resulted in a draft plan which was circulated for review in April, 2001. OSU made revisions and submitted their final product in July, 2001. This product is now being revised to incorporate Wagner Ranch and to bring it up to date prior to public review and BPA approval.

Task 2.2 Implement the Wildlife Habitat Conservation and Management Plan completed with the cooperation of Oregon Dept. of Fish and Wildlife.

This plan, essentially an overview of the property management needs, is currently being implemented, and the property is receiving Wildlife Habitat tax deferral.

Task 2.3 Complete and implement a Weed Management Plan

The Weed Management Plan has not been written, due to unexpected time demands associated with Wagner Ranch acquisition.

Task 2.4 Complete a Fire Management Plan and arrange for wildfire control.

A temporary wildfire control agreement was arranged with the BLM for 2001. Future wildfire control will be by contract with BLM. A Wildfire Response Plan with emergency contact info was prepared prior to the 2001 fire season.

Task 2.5 Implement the public access regulations developed by the Access Advisory Committee composed of tribal, federal, state, and local representatives.

Public access management has been conducted according with these regulations, and has included public and tribal hiking, hunting, and education programs.

OBJECTIVE 3. Protect, manage and enhance the assets and resources of Pine Creek Ranch.

Task 3.1 Conduct treatment of noxious weeds using mechanical, chemical, and biological control as appropriate.

Noxious weed control was conducted primarily by subcontract with Jefferson County Public Works, and included release of biological control agents on YST, and herbicidal control of Russian olive, Scotch thistle, YST, Russian knapweed, Diffuse knapweed, and Whitetop. Noxious weed control was funded by a grant from ODA.

Task 3.2 Begin plant community restoration work.

3.21 Conduct initial planting of cottonwoods along Pine Creek.

Cottonwoods (56) were planted at three sites on Pine Creek by volunteers and staff from the USFS/ BLM Clarno hardwood nursery project in April, 2001.

3.22 Develop sources of native plant materials for planting in 2002 and beyond.

Initial conversations have occurred with nurseries and agricultural experiment stations about propagation of basin wildrye and native shrubs for planting in association with a CREP riparian buffer.

Task 3.3 Contract with engineers to develop solutions to fish passage problems at culverts on Pine Creek.

HDR, Inc. has been contracted to design new culverts and/or bridges at three sites on Pine Creek. This work is funded by OWEB and is a cooperative project with Wheeler SWCD.

Task 3.4 Monitor for trespass cattle, and work with neighboring landowners to reduce trespass problems.

Trespass by livestock has been frequent, but in relatively low numbers (the largest group of cattle retrieved numbered 14). Neighbors have generally been prompt in retrieving livestock.

Task 3.5 Close and rehabilitate ranch roads not needed for management purposes.

Ranch roads are closed to the public, and roads not necessary for management have not been used, with some exceptions during the HEP. No rehabilitation has been conducted.

OBJECTIVE 4. Deliverables

Task 4.1 Compile quarterly progress reports and submit to BPA.

Quarterly reports were submitted in December, 2000, and March and June, 2001.

Task 4.2 Submit Annual Report for FY2001.

This is the annual report for FY 2001.

Task 4.3 Submit PFC report for Pine Creek

The PFC report has been submitted with this annual report.

Task 4.4 Submit draft plans for BPA review:
Watershed Management Plan
Weed Management Plan
Fire Management Plan

Plans will be submitted for review as they are completed.

National Riparian Service Team Report
on the
Pine Creek Assessment for the Confederated Tribes of Warm Springs
April 3-5, 2001

Background: Pine Creek Ranch was purchased in 1999 by the Confederated Tribes of Warm Springs using Bonneville Power Administration Fish and Wildlife Habitat Mitigation funds. The 25,000 acre property will be managed in perpetuity for the benefit of fish and wildlife habitat. Major issues include:

1) Restoring quality spawning and rearing habitat for steelhead. Streams are incised and fish passage barriers exist from culverts and possibly beaver dams.

In addition to steelhead habitat, the Tribes are interested in overall riparian recovery in the John Day River system for wildlife habitat, watershed values and other values such as recreation.

2) Future grazing for specific management purposes. Past grazing practices undoubtedly contributed to current unacceptable conditions.

The main stem of Pine Creek has already been enrolled in the CREP program administered by the USDA, Natural Resource Conservation Service in part because of the cost-share for vegetation restoration in a buffer portion of old fields and in part because of rental fees that will help the Tribes to pay the property taxes. Grazing is not allowed in the riparian buffer for the term of the contract.

3) Noxious weeds are a major concern.

4) Encroachment by western juniper throughout the watershed is a potential concern for the hydrology of the creek.

Purpose: Mark Berry, Habitat Manager, for the Pine Creek Ranch requested the Team to address the following objectives:

1) Introduce some of the field staff and others to Proper Functioning Condition (PFC) assessments and concepts.

2) Do a PFC assessment on approximately 10 miles of Pine Creek.

3) Offer management recommendations.

4) Provide guidelines for monitoring.

Proper Functioning Condition Assessment:

National Riparian Service Team (NRST) members Steve Leonard, ecologist/grazing management specialist, Ron Wiley, fish biologist, Janice Staats, hydrologist, and part time member Mike Borman, Oregon State University extension rangeland resources specialist, provided a ½ day overview of PFC assessment procedures at the Hancock Field Station on April 3, 2001. Attending were Mark Berry, Cy Jim, Ryan Smith, Marlene Schmitt, Erin Chamberlin, Ted Molinari, and John Laing. Following the overview, the entire group did a reconnaissance of Pine Creek from the upper most point of public access to provide an overview of the creek and determine possible upstream influences to the Pine Creek Ranch property. The group, except for Ted and John, then proceeded with a PFC assessment of Pine Creek proceeding from where Pine Creek enters the east side of the property to the confluence with the John Day River.

Fourteen reaches were assessed which corresponded closely to the preliminary delineations described by Mark. The preliminary reach #5 was combined with preliminary reach #4 because of the short distances and similarities between the two in PFC attributes. Final ratings included:

- 1 reach (0.2 miles) in proper functioning condition.
- 1 reach (0.5 miles) in nonfunctional condition (with inclusions of functional at-risk).
- The remaining reaches (10 + miles) are at various levels of functional at-risk, predominantly in a slight upward trend.

Original assessment forms were retained by Mark Berry.

General Observations Relating to Functionality and Recovery:

The vast majority of the stream has incised to a lower base level. The head cut visible in the old air photo (1950's?) in the Hancock field station dining area helps put a time frame on one of the headcutting event(s). The whole system is now going through channel evolution from a gully with a flat bottomed channel and no accessible floodplain to a moderately meandering, small to moderate floodplain stream expected with the gradient and substrate in place. The process is slower than expected given the soil type (not so clayey as to be cohesive enough to hold the downcut channel together). The slower than expected floodplain development may be due to lack of residual vegetation from past grazing practices or could be due to the flow regime not having enough energy to erode banks except in infrequent high flow events.

Because of the gully-like character, there is a need for erosion to slowly take place to make room for and develop a floodplain. Improved vegetation will help capture soil from eroded banks during high flow events. Occasional setbacks from excessive bank erosion might occur from high flows during the recovery process which may take decades. Recovery from each setback is expected to be more rapid than ones before unless it is from catastrophic flows. Although we hope that the widening and floodplain development takes place gradually, additional bank stabilization will only “pickle” the stream in place and is not advised.

The culvert at the trailer poses a risk to further downcutting the stream above if it gets washed

out as well as being a fish passage barrier. This will require an engineering solution because of the large drop and associated hydraulic energies.

The headcut in the lower section needs to be monitored to decide if its worth trying to harden.

All the vegetation species needed for recovery are present and the reasonable expectation is that they will increase with proper management. Woody plant composition is excellent in most reaches as is recruitment from sprouting species. Herbaceous stabilizers (sedges and rushes) are present but conspicuously lacking in abundance. The initial release of upland species and increaser species such as Kentucky bluegrass give an impression that conditions are better than they actually are. However, colonizing species such as brookgrass and watercress are abundant in most reaches and will provide sites for establishment of stabilizing sedges and rushes barring high flows in the near future.

Management Considerations

Fisheries: Fish habitat is expected to improve with increasing bank stability and woody plant regeneration. In-channel features may change more slowly and are usually developed with moderately large flow events in the 15 to 20 year return interval range. Some structural habitat work may be considered, but we recommend waiting until the stream is in PFC, or at least approaching PFC. Structural work in a system that is mostly functional at-risk is itself risky. The more a system is functioning, the more structural type work for fisheries has a chance to work, if it's necessary at all.

Vegetation Manipulations:

Juniper Encroachment: Juniper encroachment may be a problem in parts of the watershed. In the absence of a natural fire return frequency, junipers encroach onto deeper soils. In areas with 14 to 15 inches of precipitation, dense juniper stands can reduce or arrest percolation of soil moisture into aquifers or lateral subsurface soil moisture movement to feed streams. In drier precipitation regimes, juniper effectively competes with desirable grasses, forbs and shrubs in the under story. In addition to reducing forage for both wildlife and domestic livestock, the reduction of under story may lead to increased overland flow, increased surface erosion and eventually reduced site productivity. Juniper is not necessarily a "bad" plant and provides many habitat values for wildlife when it is confined to its normal sites (usually low producing sites that don't carry fires well). Therefore we recommend considering site selection carefully before performing juniper control measures.

We agree that both prescribed fire and mechanical thinning are viable tools for juniper management. Some places may require mechanical thinning to provide near surface fuel continuity before prescribed fire can be used effectively.

Old Field Restoration: Weeds are a concern on abandoned hay fields. Triticale was seeded in one field unsuccessfully. Triticale could probably be established with irrigation but would only be a short term solution and would require intensive grazing or harvest to allow reintroduction of native species and reduce potential extreme fuel loading. We suggest trying some small trial

plots to determine feasibility of reestablishing native vegetation using a variety of techniques prior to any large scale effort.

Great Basin wildrye was probably dominant, at least on portions of the terraces now occupied by hay fields. It is not known whether or not Great Basin wildrye can establish and persist on these sites now that the creek has down cut to a lower base level thus lowering the water level. If test plots proved successful, it would be our first choice. It has a good root system and is tall enough to compete against most weed species. Great Basin wildrye is hard to establish and may require temporary irrigation to grow enough to get roots down far enough into the soil to persist. Both interseeding and deep plowing and seeding were discussed. Trial plots would provide an indication of feasibility and comparative cost. Weed control through controlled grazing or herbicides will probably be necessary during the establishment phase regardless of technique used.

If the sites have dried too much for Great Basin wildrye, bluebunch wheatgrass or one of the rhizomatous wheatgrasses might be an alternative. As a last resort, crested wheatgrass is competitive with many weeds, provides structure similar to native bunchgrasses, and is easy to establish on dry sites. It is a non native, but it is often easier to establish natives (especially shrubs) into crested wheatgrass seedings than into cheatgrass or other weed dominated sites.

Grazing: Riparian grazing is not an option on the ranch until after the CREP lease expires. Fencing the CREP buffer may still allow some upland grazing if off-site water is provided. A solar powered submersible pump in the stream is one option if distances to a water trough are not too long and troughs are equipped with a float shut-off or return flow system. If long term or semi-permanent fencing is considered, it is usually preferable to enclose a large enough area that the area(s) can be effectively used as riparian pastures in the future, if desired.

Future grazing on the ranch is to occur only for a specific management purpose to benefit fish and wildlife habitat. Weed control is one option discussed. Intensive grazing management is necessary to reduce competition to native plants without damaging them. Multiple grazing species (sheep and/or goats as well as cattle) may also be necessary to get the required selectivity on weed species. Because of the effort required to effectively use livestock as a biological control, the ranch may have to consider leasing livestock if this option is implemented.

Another option that might be considered is the use of the ranch as a “grass bank” where other ranchers in the area could temporarily lease grazing rights to rest or reduce use on their own places to initiate watershed restoration practices. This could result in benefits to fish and wildlife far beyond the ranch boundaries. We did not discuss specific grazing strategies that might be employed on Pine Creek ranch itself because of time constraints and our lack of knowledge of the ranch as a whole. However, there are plenty of examples that show that properly managed grazing can be compatible with both riparian and upland ecosystems. If this option is considered, we still recommend continued non-use for several more years to provide ample recovery from past grazing. We also recommend that if grazing is resumed on the ranch, that livestock should be under control of a ranch employee rather than a lessee.

Monitoring: The greenline and woody species regeneration monitoring techniques described by

Alma Winward (2000) in Monitoring the Vegetation Resources in Riparian Areas are the recommended protocols for Pine Creek. Vegetation cross sections could also be used, but the riparian area is expected to remain narrow for some time and the data may provide a baseline for the future but shouldn't need to be repeated for 5 to 10 or more years. Photo points are also a must, in our opinion. A Forest Service reference by Fred Hall provides some excellent recommendations.

Surveyed cross sections to monitor channel changes could be done depending on level of monitoring data desired. However, photos may be enough.

A fisheries habitat survey could also be done for baseline information, and again only needs to be repeated after expected changes in riparian recovery and the occurrence of moderately high flow events in the 10 to 20 year return interval range.